



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,082	01/21/2005	Ulrich Clemens Dahn	LU 6039 (US)	7572
34872	7590	12/21/2007		
Basell USA Inc. Delaware Corporate Center II 2 Righter Parkway, Suite #300 Wilmington, DE 19803				
			EXAMINER NUTTER, NATHAN M	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 12/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/522,082	Applicant(s) DAHN ET AL.	
	Examiner Nathan M. Nutter	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-07</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

In response to the amendment filed 3 December 2007, the following is placed in effect.

The objection to claim 12 under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim, is hereby expressly withdrawn.

The rejection of claims 1-5 and 10-12 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 7,196,140 (Dahn et al), is hereby expressly withdrawn.

The rejection of claims 1-6 and 10-12 under 35 U.S.C. 103(a) as being unpatentable over Schweier et al (US 4,454,299), is hereby expressly withdrawn.

The rejection of claims 1-11 and 13-15 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps is withdrawn with respect to claims 11 and 13, only.

The following rejections are being maintained.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10, 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

Claim 1 recites in the preamble "(a) process for preparing propylene polymer compositions in an at least two-stage process." This is not clear that any one composition is being made since there is nothing to indicate any mixing or inter-polymerization, such as would be expected from reactors in sequence or parallel. The only requirements recited are compositional, in nature, and the recitations of claims 1-7 are drawn to a process. In claims 8, 9, 14 and 15, the recitation in the section prior to the addition of the third component are likewise vague since there is nothing to provide a single product. Claim 10, applicants recite essentially a product-by-process but, as pointed out above, fail to provide sufficient guidance to produce.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as obvious over Cecchin et al (WO 01/19915).

The reference to Cecchin et al teaches the manufacture of a polyolefin blend composition produced in a multistage process wherein the first polymer may be a homopolymer of propylene and the second polymer may be an ethylene/alpha olefin (claim 3). Note the Abstract wherein the first stage polypropylene has a melt flow index as recited in claim 2. Further, note page 1 (lines 19 et seq.) for the process as shown in claims 1, 2, 3 and 6. The reaction conditions of gas phase (claim 4), temperature and pressure (claim 5) are shown at page 7 (line 21 et seq.). Note page 13 for the production of articles. At page 4 (lines 22 et seq.) where the use of multiple stages, i.e. "at least three polymerization steps" is contemplated, which at least renders obvious the recitations of claims 7, 8, 14 and 15. The reference shows the specific MFR of the polymer blend as "equal to or higher than 4 g/10 min." at page 2 (lines 12-14). The reference clearly shows ethylene content of the ethylene copolymer as being from 60 to 90% of the copolymer at page 1 (lines 27-29). This is clear since the comonomer may be present in a range of "from 10 to 40%" which gives an ethylene content of 90% as required by the claim. As such, applicant has combined known elements in a known fashion to provide results that would be expected and predictable, as shown by the reference.

Claims 1, 2, 4-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seelert et al (US 2002/0019488).

The reference to Seelert et al teaches the manufacture of a polypropylene composition wherein the first stage may be a homopolymer of propylene and the

second stage an ethylene/C<sub>4</sub>-C<sub>20</sub>-alk-1-ene, as herein recited. The MFR of the homopolypropylene is "from 0.1 to 100 g/10 min." as in claim 2. Note the Abstract and paragraph [0022]. Further, note paragraphs [0047] to [0051] wherein it is taught the use of the gas phase (claim 4), the polymerization conditions (claim 5) and the concept of claim 6. The reference teaches the manufacture of films, fibers and moldings at paragraph [0201].

The reference fails to show the specific MFR of the polymer blend, yet the range recited is common for this type of polymer blend. Further, any manipulation thereof, which is not shown by the claims, would have been within the skill of an artisan with an eye toward end-use. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference.

### ***Response to Arguments***

Applicant's arguments filed 3 December 2007 have been fully considered but they are not persuasive.

With regard to the rejection of claims 1-11, 14 and 15 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps, the claims fail to recite whether a cascade, series, parallel or other process is employed, or whether there is a physical mixing or a reactor blend produced. In the instant claims, claim 1 shows production of a "propylene homopolymer or a propylene copolymer" and the separate production of a polymer of

"ethylene and at least one comonomer," but nowhere in the claim" is it recited that a mixture, in any sense of the term, is produced. Claims 8 and 14 further recite the mixing of the ethylene copolymer with a second ethylene copolymer, but do not recite steps of mixing. Nothing in the claims indicates any specific mixing of the first polypropylene with the ethylene copolymer(s). A skilled artisan would not know what method or step(s) would be necessary to produce the contemplated polymer composition. As such, the claims are deemed to be vague and confusing.

With regard to the rejection of claims 1-15 under 35 U.S.C. 103(a) as obvious over Cecchin et al (WO 01/19915), the compositions are produced in the same manner, that is, the same steps are employed, the first polymer may be a homopolymer and possess a MFR as recited in claim 2. The reference shows the specific MFR of the polymer blend as "equal to or higher than 4 g/10 min." at page 2 (lines 12-14). As such, the skilled artisan would surely have a high level of expectation of success to arrive at the instantly claimed invention following the teachings of Checcin et al.

With regard to the rejection of claims 1, 2, 4-6 and 10-12 under 35 U.S.C. 103(a) as being unpatentable over Seelert et al (US 2002/0019488), applicants opine the reference lacks a teaching the "ethylene polymer compris(es) at least 90% by weight" The disclosure Abstract teaches that the ethylene polymer may be "b) from 5 to 50 parts by weight of an ethylene polymer containing **from 4 to 40% by weight of polymerized C<sub>4</sub>-C<sub>20</sub>-alk-1-ene**" which clearly indicates from 60 to 96% by weight is ethylene.

Applicants do not explain what else is included or where support for such may be found to explain why the polymer is not as recited. Further, applicants opine the reference lacks a teaching "wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight." Again, attention is directed to the Abstract. It follows that if a polymer is present in an amount as low as 5 parts by weight polyethylene compared to 95 parts by weight for the polypropylene, a homopolymer would only enable a 5% ethylene content. Since the reference shows a broader range (i.e. not a homopolymer) that range would certainly embrace the recited range of inclusion for ethylene in the composition. At an ethylene content of 90%, and a polymer content for the polyethylene as 20 parts by weight in the composition would provide an expected 18% ethylene content for the overall composition, which is well within the confines of the recited range. Applicants further opine the reference lacks a teaching the "propylene polymer composition has a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg." While no direct teaching is made as to the composition, the polypropylene is disclosed to have a preferable MFR of "from 0.2 to 50 g/10 min.," at paragraph [0022]. At paragraph [0050], the polyethylene constituent is taught to have a MFR "in particular from 1 to 30 g/10 min." The combination of the two would be expected to have MFR values within the range recited.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

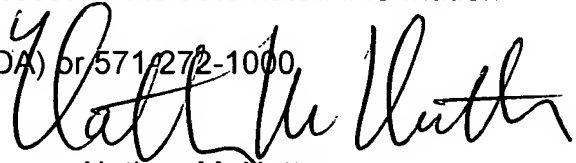
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/522,082  
Art Unit: 1796

Page 9

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter  
Primary Examiner  
Art Unit 1796

nmn

19 December 2007